

Accept

Setup Start

Stop

kidtube

Start Qty: 1.00

Req'd Qty: 1.00

Cust Item ID:

Customer:

Run Start

Stop

Re

Approvals:

Process Plan:

Date: 11-7-26

Tooling:

Date:

Date:

SPC (Y/N):

Date:

QC:

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Sequence ID/
Work Center ID

Operation
Description

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

0.00

100



DC

Document Control

DOCUMENT CONTROL

Memo

0.00

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

NA

W/O:		WORK ORDER CHANGES	
DATE	STEP	PROCEDURE CHANGE	By

Approval
Chief Eng /

Approval
QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			*Initial Chief Eng	Action Description Chief Eng	Sign & Date			

date & initial all entries

er ID 72489

6, 2011 1:29:12 PM



Page 2

D206-642-541

Accept



Setup Start



Stop



Revision

Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00

Required Date: 8/4/2011 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110

0.00



Skidtubes

Skidtubes

Memo

0.00

VERIFY AND INSPECT THE MATERIAL PRIOR TO USE

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and OSI004

AR Aluminum Rod Batch: 71112860

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

DP 11-7-29

BB 11/08/04

BE 11/08/08

XI BB 11/08/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72489

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Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

114



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Sublog

116



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

Sublog

120



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

Memo

0.00

H/Ae 11.08.10
11.08.10

1 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72489

Tuesday, July 26, 2011 1:29:12 PM



Page 4

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC3- Inspect Part Finish

0.00



QC Memo

0.00

Quality Control

✓ 0 08/08/11

150 Skidtubes

0.00



Skidtubes Memo

0.00

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ 11/75/16 ☐

Sikaflex expire date: ☐ 12-1-5 ☐

Start: ☐ 11-8-16 Time: ☐ 10:40 AM

Finish: ☐ 11-8-17 Time: ☐ 8:30 AM

(Adhere for 12 hours)

3 Dr. 11/08/11

DP 11-8-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72489

Tuesday, July 26, 2011 1:29:12 PM



Page 5

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 7/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

1 0 BB11/08/17

170



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Deburr

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

BE 11/08/17

BB

11/08/17

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72489

Tuesday, July 26, 2011 1:29:12 PM



Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/4/2011 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00 h2 2.70"

Memo

0.00 L2 4.2"

8 ulozl17

190



Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R ☐ Aluminum Rod ☒ m112860

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

BE 11/08/17

3 BE 11/08/17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 72489

Tuesday, July 26, 2011 1:29:12 PM



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Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	Sulos/18						Pro →
210 QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00	Sulos/18						Ⓢ
220 HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch	0.00 0.00							IX Ⓢ M-11/08/18

W/O: 72489		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D266-642-541 PAR #: NA Fault Category: Landing Gear NCR: (Yes) No DQA: NA Date: 11.08.29
11-783 Resolution: Re work Disposition: Re work QA: N/C Closed: ck Date: 11/08/29

NCR: 72489		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
W/06/18	#2 190	Found at inspection that the 21st hole from AFT (End nut saddle hole) Doesn't align with the saddle. Re. called when welder Process	CP 11.08.18	- Drill out + remove 4-bolt space. - weld near D2664 B*			CP 11.08.18 PS/CH	S W/06/18
		(cannot fit Bush in. tooth is Good, Drawn + W/O is Fine, Counter Boring is As per Dwg.)	CP 11.08.18	As per QST 4 A/E cool stands water flush Counter bore and Deburr			CP 11.08.18	S W/06/18
				No need for weldin' S W/06/18				

NOTE: Date & initial all entries

72489

6, 2011 1:29:12 PM

Page 8

Accept

Setup Start

Stop

Revision ID:

Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00

Required Date: 8/4/2011 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

240

QC3- Inspect Part Finish

0.00

QC

Quality Control

Memo

0.00

250

HandFinishing

0.00

HandFinish

Hand Finishing

Memo

0.00

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/R□□A□LPS-3□ M1109956

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R□□Sikaflex-291 □ M117516

Sikaflex expire date: □ 15/01

IX 11/08/19

1 11/08/19

1 11/08/19

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES		
DATE	STEP	PROCEDURE CHANGE	By	Date

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

72489

2011 1:29:12 PM

Page 9

Accept

Setup Start

Stop

Revision ID:

Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00

Required Date: 8/4/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

260



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

Inspect Nut Plate & Inserts

0.00

270



HandFinish

Hand Finishing

HAND FINISHING RESOURCE #1

0.00

Memo

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ M117516Sikaflex expire date: ☐ 15101

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: 121A

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ M117516Sikaflex expire date: ☐ 15101

8 w/08/19

⑥

1 / 21/08/19

W/O:		WORK ORDER CHANGES		
DATE	STEP	PROCEDURE CHANGE	By	Date

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

72489

2011 1:29:12 PM



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D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/26/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280

QC5- Inspect part completeness to step on W/O

0.00

8 ulos 119



QC

Memo

0.00

Quality Control



290

Identify as per dwg & Stock Location: _____

0.00

PPP 70367



Packaging

Memo

0.00

Packaging

11/8/25

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/8/26

C 21108124

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

9:21 PM

72489

Item: D206-642-541

Parent Item Name: Replacement Skidtube




Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190  Extrusion Round 3" 206		Manufactured	No			110	Each	31.4000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		31.4							
				59874		31.4							
D3285-1  Cap		Manufactured	No			110	Each	102.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG002		102							
				52511		55							
				52647		47							
D3282-041  Float Web (206L/407)		Manufactured	No			150	Each	0.0000	1	1			

B69714

① DP 11-8-16

① DP 11-7-29

BB 11/28/08

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By		

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1:29:21 PM

ID: 72489

Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190 Each

52.0000 12 12



Cross Bolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	40	
68224	2	
71355	38	
LG001	12	
65317	1	
68507	11	

BE 11/08/17
B 72704 *12

D3275-1

Manufactured No

190 Each

239.0000 12 12



Crossbolt Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG002	239	
66930	106	
68946	72	
70688	61	

BE 11/08/17

12

CR3212-4-03

Purchased No

250 Each

1,184.000 2 2



Cherry Rivet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP-B	2	
110139	2	
ST311	1182	
114859	1182	

11/08/18

VZ

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1:29:21 PM

ID: 72489

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3415-041

Manufactured No

250 Each

59.0000

1

1



Nut Plate



JL 11/08/18

LocationLoc QtyLoc Code

ST053

59

33842

15

67605

44

JL

CCR264SS3-3

Purchased No

250 Each

477.0000

2

2



Cherry Rivet



JL 11/08/18

LocationLoc QtyLoc Code

FP-B

2

113973

2

ST311

475

117086

49

117849

426

JL

ALS4-1032-130

Purchased No

250 Each

2,772.000

78

78



Insert



JL 11/08/18

LocationLoc QtyLoc Code

ST281

718

117331

8

118386

710

ST282

2054

117717

54

118237

1744

118312

256

JL

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1:29:21 PM

72489



Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3536-15

Manufactured No

270 Each

21.0000

1

1



Gasket



M 4108118

LocationLoc QtyLoc Code

FP011

21

66559

8

B72881

x1

71586

13

D3536-23

Manufactured No

270 Each

33.0000

1

1



Gasket



M 4108118

LocationLoc QtyLoc Code

FP011

33

43406

1

69902

20

x1

71579

12

D3536-35

Manufactured No

270 Each

27.0000

1

1



Gasket



M 4108118

LocationLoc QtyLoc Code

FP012

27

69755

13

B72882

x1

71587

14

D3536-39

Manufactured No

270 Each

30.0000

1

1



Gasket



M 4108118

LocationLoc QtyLoc Code

FP015

30

66241

4

69760

26

x1

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1:29:21 PM

ID: 72489

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-15

Manufactured No

270 Each

20.0000

1

1



Wearshoe



M 11/08/17

LocationLoc QtyLoc Code

FP018

20

68358

6

69931

14

x1

D3535-35

Manufactured No

270 Each

28.0000

1

1



Wearshoe



M 11/08/17

LocationLoc QtyLoc Code

FP018

14

65926

1

67598

1

70815

12

ST

14

69756

14

x1

D3535-39

Manufactured No

270 Each

16.0000

1

1



Wearshoe



M 11/08/18

LocationLoc QtyLoc Code

FP018

16

64076

3

69759

13

x1

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1:29:21 PM

72489



Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-23 Manufactured No

270

Each

33.0000

1

1



Wearshoe



JL 11/08/18

LocationLoc QtyLoc Code

FP021

33

68342

5

70818

16

71581

12

✓

D3537-3 Manufactured No

270

Each

1.0000

1

1



Wearpad



JL 11/08/18

LocationLoc QtyLoc Code

FP017

1

35697

1

B70481

✓

D3537-1 Manufactured No

270

Each

44.0000

9

9



Wearpad



JL 11/08/18

LocationLoc QtyLoc Code

FP017

44

69817

5

70686

2

70972

37

B369530

✓

AN960C10L NAS1149C0332 Purchased No

270

Each

0.0000

80

80



washer

M118306



(1801) JL 11/08/18

AN960C416 NAS1149C0463 Purchased No

270

Each

0.0000

1

1



washer

M117735



(11) JL 11/08/18

Tuesday, July 26, 2011 1:29:21 PM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES		
DATE	STEP	PROCEDURE CHANGE	By	Date

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

2011 1:29:21 PM

Order ID: 72489

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

914.0000

2

2



Phenolic Washer



u 1108118

LocationLoc QtyLoc Code

ST074

912

64177

416

66821

496

v2

ST077

2

52505

2

AN3C4A

Purchased

No

270

Each

1,144.000

80

80



BOLT



u 1108118

LocationLoc QtyLoc Code

ST350

1144

117313

2

1118628

y80

117688

187

117795

393

117872

22

118012

500

118112

40

AN4C5A

Purchased

No

270

Each

500.0000

1

1



BOLT



u 1108118

LocationLoc QtyLoc Code

FP-B

106

112243

106

v1

ST345

394

112243

394

Tuesday, July 26, 2011 1:29:22 PM

Shop Packet Print

Page 7

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES				
DATE	STEP	PROCEDURE CHANGE	By	Date		

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

011 1:29:22 PM

ID: 72489

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 7/26/2011

Required Date: 8/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270

Each

108.0000

1

1



Aft Cap



JL

u108/15

LocationLoc QtyLoc Code

FP004

58

68280

58

✓1

FP006

5

62678

5

FP-4

38

70945

1

71070

37

fp5

7

71038

7

D3413-1

Manufactured No

270

Each

35.0000

1

1



Ring



JL

u108/15

LocationLoc QtyLoc Code

ST420

33

62961

2

66387

1

70773

25

71041

5

✓1

ST473

2

66945

2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	

Picklist Print
Tuesday, July 30
Work Order

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED

SUBJECT

DART

WITHOUT NOTICE

WORK ORDER

NO. 72489

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	SHEET 1
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	C

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

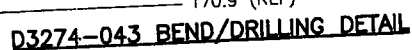
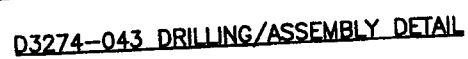
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QANCRWO RevE

DEO ATTACHED



RELEASED

07.02.12

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	CHECKED	H	APPROVED	H	
	DATE	06.12.19	TITLE		SKIDTUBE ASSEMBLY

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES				
DATE	STEP	PROCEDURE CHANGE	By	Date	Qt.	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

TITLE SKIDTUBE ASSEMBLY		REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DATE 09.06.17	CHECKED [Signature]	MFG. APPR. [Signature]	APPROVED [Signature]	DE APPR. [Signature]	DATE 09.06.23	DATE 09.06.23	DATE 09.06.23

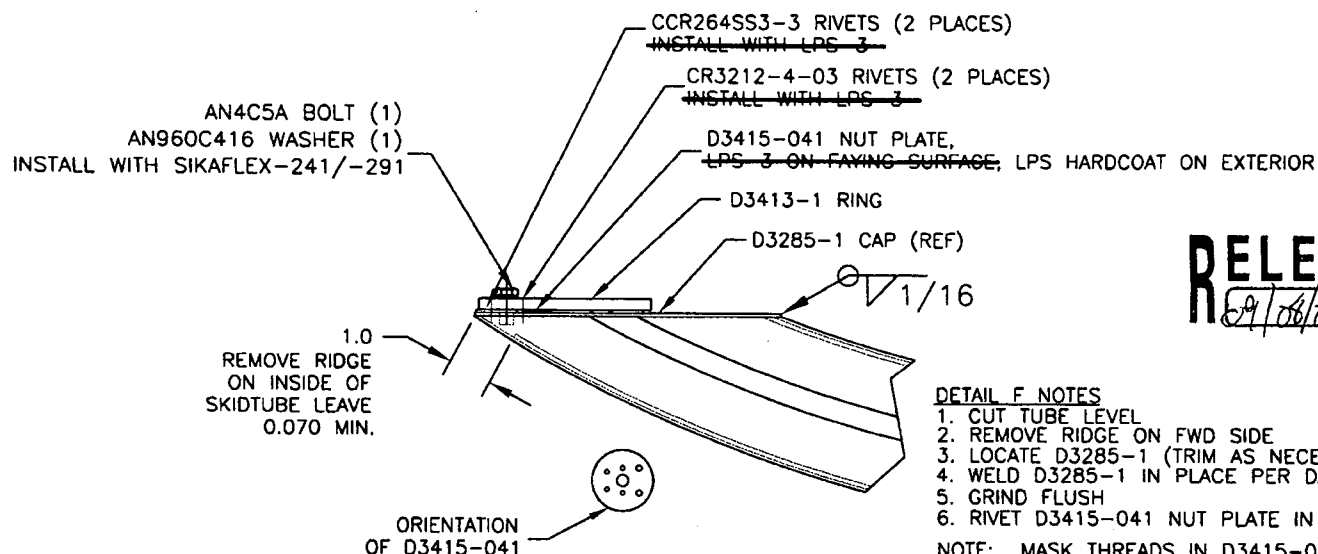
LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

72489

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS-3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

W/O:		WORK ORDER CHANGES			
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 261

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: B69449
Part number: D206 642 541
Description: 206
Welding Process: Tig ☒ Mig ☐
Base material: Aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Hal Lewis Date of Test Coupon 11-08-11

Welder Barclay Elliott Date of Test Coupon 11-08-11

The above named individual is qualified in accordance with AWS D17.1.2001 to weld